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ABSTRACT

Three papers are presented: the future society for which we are educating, by Robert Theobold; relationship of state government and higher education in the future, by Patrick Lucey; and the future of manpower, the economy, and higher education, by Willard Wirtz. (MSE)

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FOREWORD

The three addresses in this monograph were given at SCUP-12, the 1977 convention of the Society for College and University Planning, held at Seattle, Washington. Robert Theobald and Ambassador Patrick Lucey spoke on August 15th, Willard Wirtz on August 16th.

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The monograph is also a tribute to the SCUP-12 committee which prepared and presented a very successful program under unusually adverse circumstances. The co-chairmen of that committee were Senator Barney Goltz and John Mundt. To them and to their entire committee (and to Dr. George A. Pierce, who was the principal contact with the donors) also go the Society's thanks. They were instrumental in giving SCUP a chance to recreate its own future: we hope these addresses will help members of the Society create their own.

The Future Society for Which We Are Educating

ROBERT THEOBALD

I hope nobody was stupid enough to believe the title. And I hope that nobody was stupid enough to come on the basis of that title, because if so you deserve a refund. You are not going to find out. I do hope that I may be able to give you some tools to begin to understand why we are confused. And if I can do that, and perhaps suggest a few ways where we could begin a process of stopping being confused, I shall be more than satisfied.

I want to start with the nature of planning and suggest to you that the problem is you have got to understand the situation before you can plan for it, as John Spellman has suggested to us. And I will take as my illustration the *Titanic*. Those people who went on the *Titanic* were planning for a pleasant voyage. Their primary concern was which restaurant they should eat in and what they should eat in the restaurant, and whether they should stay up and go dancing or whether they were too tired and had to go to bed. When the ship struck the iceberg, most planners on the ship presumably said, "Well, that is unfortunate but this is an unsinkable ship. So we have encountered a temporary inconvenience." And apparently even the Captain of the ship decided this was a temporary inconvenience, and the net result was that this turned into a rather major crisis which nobody was able to deal with. Now, the reason for the analogy: I am not sure whether we are on *Titanic I* where we are planning to go for

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a pleasant voyage (if we listen to a lot of our politicians, that is what they're telling us) or whether we are on *Titanic II* where we are going through a bad period but we can confidently expect to come out of it, or on *Titanic III* which is a rather desparate crisis where we should be scouring around doing something and trying to act. At least I am sure which one it is, but our culture is not, and I am going to try and explain why I am sure as I go into this speech.

First I have to wake you up on this beautiful Monday morning, where I am sure you'd rather be out in Seattle, it being one of those days when it is sunny. You know the myth around here—if it is sunny you *must* go out, and apparently this is endured through the hard weather here and through the hard weather here and people have been playing tennis in 100° temperatures on the grounds that it never happens. The last time, I think, I spoke in Seattle the temperature was very much like this and the weather was very much like this and nobody came to our conference because everybody knew that when it's fine you go out. It does not matter what else you have committed yourself to.

So, we have a quiz. We start with an easy question. How many of you read science fiction? It is nothing to be ashamed of. How many of you do not read science fiction? That question is less frivolous than it seems. I've read some political science lately that seems to me to qualify. Not to speak of planning documents. How many of you believe in extrasensory perception? How many of you don't? How many of you believe that our educational system is preparing people for the world in which they are going to live? Please take note. That final result is one I get everywhere from students, teacher, parents, bureaucrats, administrators and just plain human beings. So, presumably as planners you are going to do something to change that. Is that a reasonable assumption? The question is: What?

The beautiful ideas a lot of us had in the 60's didn't work out. Maybe because they weren't tried, maybe because they weren't right. But we've gone back to a pattern which seems to me to be so similar to that which existed before the troubles, or the perturbations, or whatever word you want to call them, that it is uncanny. At least it would be uncanny if you didn't understand systems theory and understand that

systems go back to their original state unless pushed very hard and very intelligently. We may have pushed very hard but we sure didn't push very intelligently.

Now, one of the first things I have to say around this room, and let me before I say this preface my remark with, "Please don't get hung up on the first thing you dislike, you'll find plenty more as you go along," the nature of this group is an anachronism. You are white, with rare exceptions; male, with rare exceptions; middleaged, with rare exceptions. You are going to be under a lot of pressure because you're not going to be able, in this culture, for good or bad reasons, to keep that sort of structure in a professional group.

Now, I just went through today's papers. (You can get confused just with one day's papers.) And I did not even take all of the stories. The first story, "Water Goof Riles Farmers". They said there was going to be a drought and they spent a lot of money and then there was not one. Very upsetting. "U.S. Probes of Aliens Snarled by Red Tape." Some of you may be following that set of stories. It is a very disturbing set. We have an enormous number of people in this country illegally. Enormous pressure on the Mexican border and we do not know how to deal with it. "Fewer New Nuclear Plants and More Foes" is story number three coupled interestingly enough in the *Wall Street Journal* with a statement that Carter is to submit measures to spur nuclear facilities. A fairly good guarantee of some reasonable conflict in the society in the very near future. Number four, "The Laetril Medicine Show". My state, Arizona, is one of those which has said that we do not trust federal bureaucrats and the doctors are very unhappy about that. They are unhappy about a great many other things, as well, including any move, as far as I can see, to enable people to make their own decisions about their own medical needs and health needs.

There was a recent row in Congress where somebody said, "Would not it be nice if medicines listed what they were meant to do", and the doctors said, "That is trampling on our prerogatives." We have heard that in certain planning circles, by the way.

Number five, "Reason to Evaluate Nursing Homes". More and more old people are needing somewhere to go.

Nursing homes are becoming uninhabitable. If you have not read or at least looked at *A Tender Loving Greed* you ought to.

"The Legal System Courting Disaster." These are genuine headlines, I am not cheating. You can go and check the papers if you want to. The legal system does not work. It does not work in either the criminal or the civil cases.

So, the famous TV show, "Soap", set for the fall is reviewed by brave Catholic critics. The Catholic Church has said the show should not go on and the networks say they have an obligation to show shows to people who like that sort of material.

Money is not *value*, just to show that I read the sports pages, too. Did you catch that infuriating little remark Pete Rose of the Cincinnati Reds made the other day? Rose said he would like to stay in baseball as a coach after his playing days were over but only if he were a glorified coach. I would not take some $20,000 a year job, Rose said. The writer goes on to suggest that maybe there are some people who never make $20,000 a year in their lives. And maybe some people were beginning to get a little bit irritated at the levels of salaries certain types of people receive for certain types of activities. In fact, as far as I can see there are some very major questions being raised about the distribution of income in our culture. Why are people like us worth as much as we get? Why are professors worth as much as they get? Is it possible that they are not? A very disturbing thought but one which occurs quite frequently around community colleges where community college professors sometimes get more than practically anybody else in town. People say "Are they really that good?" And sometimes I wonder.

Ann Landers, and I am cheating slightly on this one because the Ann Landers Column I am referring to is not in today's papers, said about two days ago there was a story about a kid who said, "I want to go to trade school. My parents do not want me to go to trade school. Will you please set my parents straight." Ann Landers, much to my surprise and much to my dismay, said "You should go to college. Everybody should go to college." They are not listening, and they are not going to listen. And the reason is that in the

final story I will take from the Wall Street Journal, and it is a quote and I do not argue that it is right but it is certainly one that is going to happen unless we change trends:

> "In a traumatic reversal of historical experience, children born of persons entering adulthood in the 1950's and the 1960's will on the average experience relatively lower status than their parents. This will reflect both declining educational attainments induced by the saturation of the highly educated labor market and contracting career opportunities facing those who do in fact complete educational programs."

Now, I do not think that has to happen, but it will happen, unless we do some things which we do not seem to be capable of doing at the moment. And it will happen unless we learn to think and plan more intelligently. I want to suggest to you that there are four visions of the future that work in different ways and that they are different assumption patterns which lead to different conclusions.

If you think back to the energy crisis, it was not uncommon for the *New York Times* to have four daily articles all reaching different conclusions from the same set of data. It must have occassionally struck you that there must be something wrong somewhere. And the reason is that it is not the data that are important, it is the assumption patterns that one uses to deal with that data.

The first set of assumption patterns is, in my jargon, "The Positive Extrapolist". They are the people who say things are going to go on into the future, that in general they are going to be good, that there are a few sort of bubbles around the system but they are going to go away. Hermann Kahn is the high priest of the Positive Extrapolist and in general our culture wants to hear that message at the present time. They are comfortable when somebody will tell them it is going to work out.

Positive Extrapolists work off data. Nice, tidy, neat, understandable data but they never go back and look at the assumption patterns that underlie the data, which usually makes the data either useless or at the very best extremely tendentious.

Educational data and statistics are terrible. But we use them to prove anything that we want to prove and we are very good at it. But the base data do not hold up. Now as long as you can stay within that model it is extremely comfortable because when you say it is going to happen, it is going to happen. Most educational planners until five, six, and four years ago were Positive Extrapolists. In fact I remember talking to the community college group as keynote speaker about two and a half years ago in this town just before the community college crisis struck and everybody was saying, "We are going to grow forever and the legislatures are going to fund us forever and nothing can go wrong." Well those of you in the community college business know that that dream burst.

All of us, I think, in the community college business and in the post secondary business are asking some questions, most of which, in my opinion, now come out of what I call the "Negative Extrapolist" style. And that is things are not going to change very much anyway and because they will not change, things are going to fall apart and our culture is in deep trouble. In the more extreme versions of this image, the world will fall apart—it is only a question of the date you will choose for the apocalypse.

The Club of Rome Report, the first one called the "Limits to Growth", is probably the best single statement of the Negative Extrapolist viewpoint at the societal level. Now, the interesting thing about both these extrapolist groups is that they are both comfortable using the same data. So, Negative Extrapolist and Positive Extrapolist have great times arguing with each other and they can use the same arguments and the same styles. They do not illuminate very much but they have a great time.

The problem with the Negative Extrapolist model is not that it is not right, because I think that it is, but that it does not help very much because to prove that the world will come to an end if we do not change anything is not a very remarkable statement. It has always been true. The question is what do you need to change. And I think an awful lot of energy is going into proving the negative when we ought to be thinking about what we do to alter the dynamics of our culture.

Now, if you do not know the negatives, I am not going to tell you. Read the papers for a few days. Consider the New York experience. Look at the rates of unemployment among black teenagers and the world that they are being socialized into. And I can go on, and you all know how to go on with that set of problems which are not going to go away without fundamental change. The un-despaired go into those. I examine the economic system, the legal system, the educational system, and the healthy system and show the breakdowns are inevitable without fundamental value change.

The third group is the Positive Romantics. We do not think much about them in good planning meetings. But they are an awful power in our culture. EST, TM, TA, Parent Effectiveness Training, and I can go on. A huge number of groups that make a lot of money out of training people to get themselves together.

A lot of people believe that if only they are nice people, the world will work. And it is a beautiful vision. My problem with it is that it ignores or does not understand that our behavior is constrained by our social institutions and by our culture. There is no way to solve our problems just by becoming nice people because we have a culture that prevents us from doing certain types of things. If you do not believe that go back and read John Maynard Keynes.

Poor Keynes. Keynes, who is claimed to be the father of our present economic discipline would hate every Keynesian economist who is presently working. Keynes was a human being. Keynes understood that our economic system led us to behave in intolerable ways. He said it was only acceptable because we still needed it and at this time, when we need an alternative economic system, he would be the first person struggling to change it, not the person who would be struggling to keep it alive!

We also have the Negative Romantics whom we talk even less about. Negative Romantics are the people who read *Hustler*, *Playboy* (although I notice that *Playboy* is cleaning up its image lately, or trying to), and a whole slew of styles which lead us, at their extreme, into devil worship. And do not underestimate the power of that factor in our culture either. The argument behind it is that we should remember our animal nature and not be ashamed of it.

Now, where do I stand? Well, believe it or not, in the middle. Because I believe that all of those views are partly correct.

We need the positive people in our culture who tell us that we must continue to struggle, because the world is indeed based on self-fulfilling prophecies. One of Shumpater's great lines was that there are very few things worth doing that could be done on a sober calculation of the odds. In other words, anything that's worth doing is insane at the moment you start it. And if it is not insane, it is not worth doing. Therefore the "sober" planner is a contradiction in terms. Because he is fated to follow along within the dynamics of the culture rather than to effect change and improvement. Believe it or not, the planner is necessarily an enthusiast. And if he is that, all he is going to be able to do is to help you to plan the breakdown more efficiently. It hardly seems worth while.

The Negative Extrapolists are wise because they remind us that in any going system there are always the seeds of breakdown. Malthus told us that a long time ago. We might remember him one day and deal with the issue he raised. Negative Extrapolists tell us when and where we have to change, but you can not make a plan around the necessity for breakdown.

The Positive Romantics remind us that you cannot do anything unless you know who you are. (I will come back to that in terms of our educational system in a little bit.) The Negative Romantics remind us that we are animals, that any system that is set up which forgets that we are naked apes is not likely to function very well.

I am interested in those disciplines, orientations, which have tried to pull all of those things together in one way or another. You will find an odd and peculiar list—religion, philosophy, management, planning, system theory, ecology, epistemology, poetry—and I am sure you can list other ways that we have, as a society, tried to pull our worth together and be able to deal with it as a whole.

The problem is that all of those disciplines seem to be esoteric, seem to be difficult, seem to be incomprehensible. And there are moments when the unpleasant thought crosses my mind that conceivably the practitioners of this discipline

or these disciplines find some interest in convincing others that their discipline is too difficult. You know, I have discovered that the role of a professional is all too often to convince other people that they cannot do what you can do.

A good, or rather I should say, a financially successful consultant (and I know this to be my case) is somebody who tells people that they are incompetent, because otherwise why should they go on paying you? You convince people that they are competent then they might decide that they do not need you. And that is what I try and do, and I say, "Look, you are perfectly capable of doing this with a little help from your friends."

Some remarks that I like to get at the end of a speech are two. Number one, "Bob, you convince me that I am not crazy." (because a lot of us who think like this think we are—including me, most of the time, I may say), and secondly, "Bob, but you only talk common sense." That one you will get is usually meant as a put down. But my response is usually, "Unfortunately there seems to be so little common sense around at the present time."

If all of this is true, or even a hunk of it is true, what are we really talking about? I would suggest to you that we are talking about a fundamental change in paradigm, for those of you who know Kuhn's work, a fundamental change in epistemology, a fundamental change in the very way we think and act and plan and hold meetings and structure knowledge. And that a great many of those techniques that we so carefully learned, all of us when we were growing up, do not work. They are simply methods to insure that we cannot see the emerging realities.

As an economist, I know that the unemployment rate and the gross national product are two of the most magnificent techniques we have ever devised for not looking at the world as it is. The gross national product because it fails to measure the real changes which are taking place. Just one example: when women move out of the home and into the labor force, the product of their work in the labor force is "counted". But it is not counted in the home, so what we get is a double-lamic as people move out of fairly skilled jobs in

the home to totally unskilled jobs in the labor force, as many of them do. This is not a comment about whether women should be working or not, it is a comment about what happens.

We grossly overestimate the benefit to our culture as people move into the labor force. This is one of the disastrous errors behind the welfare program that Carter is proposing. We are going to get all of the women out of the house and go into proper jobs if they have kids over six. Well, of course if we want a new generation of deliquents, it is a magnificent formula. But I do not think that was good social policy given the fact that crime is already costing us our shirts.

If you just want to put it on a straight economic level, the unemployment rate rests on a set of assumptions that just do not work for our present complex culture. And I am sure that you have got things, as I have already suggested, built into your educational planning models which falsify your thinking just as much.

Management, planning, in the sense I am talking about comes as much out of a sense of the reality as it comes out of data. And the statement, "I do not believe your statistics, they do not accord with my prejudices," is in my way a perfectly valid statement. In other words if I think I know something and you can come up with some statistics, that is not the way to convince me. You are going to have to get at it from another angle.

There are too many problems with statistics. We just had one. Statistics do not necessarily remember that you might have a Boeing slump. Herman Kahn, who runs on statistics, brought out a book on Japan. It came out just at the same time as the energy crisis. And he did not mention the energy problem in any significant way. If you look at statistical bases and statistical trends it is terribly easy to go wrong because you do not look at what is lying behind them.

We have got to find a method of planning which takes account of Heisenberg, Bohr, and Einstein—of uncertainty, of interrelationship and of wholes, and that all of our culture and all of our disciplines are designed to divide things. There is economics, and there is politics, and there is sociology, and there is anthropology. And then, inside economics, there are 27 (or is it 74?) subdisciplines.

When we talk about progress in colleges we talk about interdisciplinary work. My unpleasant crack about interdisciplinary work is that it is a means of confusing the kids within a course instead of between them because all it does basically is to insure that you have several teachers teaching incompatible statements within the same subject matter.

I have never understood how we assume that the student is going to come out understanding the world as a whole if the teachers cannot. It seems that the kids may be brighter than the teachers. In any case we need to teach people to thing about wholes and Gestalts. We do not even begin to have the teaching techniques to do that. The number of places where such teachings are going on within the formal colleges or the informal systems, is extremely small. I am not saying it is the alternative schools that have those; they do not.

Most of the work we have done has been done on a bivalued logic. It has been either that one set of guys is the good guys, or the other set of guys is the good guys. For me, it is that middle tension position that is the good position.

I want to suggest to you that we are continuing an argument which goes back in Western history as far as we can see. What we are arguing is between the heresies of predestination and free will, for those of you who understand religious heresies; predestination which said that the individual cannot affect his fate—free will that said the individual could determine his fate. Extrapolation and romanticism are the social level of that argument. Extrapolation says we are going where the trends say we are going and we cannot do anything about it, and the romantics say we can do anything about it tomorrow morning.

All right, in that context, let me suggest to you that there are four fundamental changes. Number one, we need to develop a communication culture and not a control culture. The control culture has broken down. That was a beautiful, simple idea. Somebody is at the top, somebody is at the bottom. It is possible to pass an order from top to bottom, and that the person at the bottom will get the order that was sent from the top, It went reasonably well for a time when the culture was simple and clear but has broken down for two reasons.

First, the culture is not clear any more and people are too well-educated to believe it is. Secondly, people do not believe that some people have unlimited wisdom. We need communication systems. If you do not believe that, observe the behavior of cats.

My favorite story on cats is of a houseproud man who threw the cat out everytime it clawed the curtains. Guess what the cat learned? The way to get out was to claw the curtains. Students are not less bright than cats. Set up punitive systems and they will get round them so fast it will make your hair curl.

People do not learn what you learn; they learn what is in their self-interest. If you set up a control system, and it does not fit their needs, they will find ways around it. That is why price control does not work in the economy. That is why this idea for controlling hospitals will not work in the society. And that is why a lot of our systems and colleges and schools do not work. You know we really still believe that kids respond to positive and negative sanctions and cannot be challenged to behave well, and then we are surprised that they behave badly because you set them up in a negative and positive sanction situation.

My favorite story concerning that aspect involves two Oklahoma city junior colleges, one with open stacks and one with closed stacks. Guess which one lost more books? the one with closed stacks. It is more fun to steal when there is a challenge! I am serious. If you think you can set up a system that can lick the kids without making your place an armed camp, you are kidding yourself. If you look at how close we have come to armed camps, not so much in the post-secondary but in the secondary level, you can scare yourself very badly. If you have not read some of the work that is being done by the Senate on the state of the school system, please do so. These are the kids some of you are going to inherit and have to deal with.

Diversity and not equality. Well, I suppose the latest insanity at the Federal Government has to be (and I at last have a point which I think is going to be popular) that they have decided that all schools should cope with all handicapped people equally. Well, I do not think anybody knows what it is going to cost. I think everybody knows it is going to be too much. And I cannot make any sense of it.

I can make sense of the statement that says that every child, however handicapped, should be able to have an education, although I have some problems with that at a different level. But to say that *every college* should be able to cope well with *every type of handicapped person is insanity*, because it cannot be done. Oh, you can put in the ramps and you can put in the ways to teach blind people, but if you do it for one or two people, you know what sort of system you are going to have? You are not going to have one. And all we want is to keep them together because we have an equality model and we will not accept that people are different and need different treatment.

I know the problem with the lack of an equality model; I know what we have done with it. But it is no good setting up the wrong model simply because we have mucked up in the past. I know how we have used the statement that we are going to have separate and equal facilities. But it is no good to say that we will have equal facilities because we cannot afford people to think alike. No more than you can have an ecological system that has no diversity, can you have a social system that has no diversity.

That is why my comments about stuff at the beginning are serious. It is my guess that you do not have enough diversity. You are coming out of the same past, many of you the same parents, and you do not have enough people to say to you, "That does not make any sense, friends." What you need is a wide range of the stream of cultural traditions and enough people who do not share the dominant stream to feel that they will not be killed by challenging it.

The third fundamental change that must occur is to stop running a culture based on the idea of more. We are still saying more is better than less, even if it leads us into such thinking that two television sets playing at the same time are better than one. If you think I am kidding, you should have seen an advertisement which used to be up on the walls of the airports from *Newsweek* which showed the good life as two people watching two different television sets and drinking cocktails.

Most of us would do a lot better to stay home occasionally than to take the boat out one more time. Buying things does not bring satisfaction. We have got some good psychological evidence on that. We think it does; we may even do it for a couple of days. But that is not what's wrong with most of us.

The great thing about "enough" is that I cannot determine enough for you and you cannot determine enough for me. Each of us needs a personal definition of enough. Which comes back to people knowing who they are and what they need.

And finally, we need to change values. I know that it is very old-fashioned to talk about the necessity for values. I know that it is not "right" to bring values into planning meetings or above all into the classroom. I know that passion and compassion are inappropriate in educational establishments. They are inappropriate because we believe that knowledge is objective. And therefore when you bring passion and compassion in, you have messed up that beautiful objectivity.

We all know that knowledge is not objective. You know, when I came to the United States in 1958, and was in New York, I used to believe the *New York Times* statement, "All the news that's fit to print." It was a lovely world; I thought I could read the *New York Times* and understand the world. I really did. Until I discovered that black people did not think that any of the news had been printed. The news is not the same, depending on the viewer.

You have not even heard the same speech today. If you want to prove that, just ask some people what they think I said today, what was the key point I was making, and you will get as many answers probably as there are people in this room. Each of us listens in terms of our experience and our perceived self-interests. All I hope to do perhaps is to leave one or two ideas behind that you will have to struggle with. I do not expect you to understand this speech because it has been conveyed much too fast and is much too complex to get across as a neat, tiny package. It is not meant to be that. If you get interested, you will struggle with it and move on it. But I'm not trying to tell you what the answers are.

We need values. Societies do not operate without honesty, responsibility, humility, love and a respect for mystery. And I will take any other variant you would like to give on those. We need a value culture. The extraordinary thing is that I can prove that to you out of system theory just as well as I can prove it to you out of a religious faith. I have argued more and more that intelligence and religion lead you to the same point. One of our tragedies is that we have split them and we have said there is one thing which is religious knowledge, and we do not teach that formally in educational establishments, and there is another thing called intellectual knowledge which we do teach. And most colleges, including most church colleges, are still (when there is a clash) giving up on religious values and going to incorrect secular knowledge.

Now, what do we have to do pragmatically? Number one, we have to come up with new ways of structuring knowledge. And I mean that in its literal sense. Our present style of document says that we can come up with an unambiguous policy measures. We do not understand the world well enough to do that. So some of us have been developing a style which we call a "problem possibility focuser", an involvement which says, what are the agreements on the subject? What are the scenarios which stem from the different perceptions and what are the resources available to people studying that subject? That document is then available to students, decision-makers, and media. And it reflects where the culture actually is rather than having to read 27 books to get the different viewpoints. Its job is to state the state of the debate, rather than to say, "I know."

I argue that if any of you think you know what the situation is in any subject, you just have not read enough yet. I am serious. We ought to be confused because we do not know enough. And the object of the problem possibility focuser is to state the confusion. Then you are unlikely to make serious mistakes because all of the issues will be in the document, because you will not exclude it on the grounds we cannot handle it. That is what we usually do at the moment, we say "Well, we have dealt with the parts of the problem which we can handle." We forget that maybe the very part of the problem that we cannot handle is actually the critical one. By the way, that is certainly true in the food supply area because the

one thing we do not know is the meteorological issue. And if you do not know the issue you had better deal with it on an extremely conservative basis.

Secondly, we need to catalog people. What do I mean? What we catalog at the moment is materials, books, articles, most of which should never have been written in the first place. By the way, one thing you might start on is getting rid of the "publish or perish" document, which simply means you publish things which are no good because you know that you can get them published with some reasonable degree of certainty in a professional journal. You do not deal with complex subjects because conceivably they would not end up in a piece you could write. Think I am too harsh? Go and read your professional journals.

And then what do we do? We bring the computers in and we classify all of this verbiage and bluntly, garbage. And that becomes the way that we find "what we need". Unfortunately, it is not what we need. We need to find people, And we are developing some systems for finding competent people, at the local level, at the state or regional level, the national level. And I am not saying we know how to do it, but I am saying we are trying to find out.

Thirdly, we need to use networks at a conscious level. You know, there is a lot of talk about networks and there are a group of alternatives to the proper way of doing things. From my point of view, they are the way that things get done in what I call the communication era. We need to find out how to make them work for us. There is a lot of good work out on networks but, as I say, it is marginal and not central. Even though, if you study the innovation process, you will find out that most of the innovation has in fact come through networks.

And, perhaps above all, we need to go back to creating a situation, which is our job, a sense of trust and belonging in our community. We can do this at many levels, but specifically as it relates to people in colleges, that it is worth coming to the college. It is not just a place where you get a degree which leads to a job. It is a place where you are cared about as a human being. When you come to the University of Ala-

bama or Governors State, or wherever it is, you come because it is the college for you. And each college is truly diverse and attracts people because of its diversity.

I have argued, and I am very serious about this, that a successful college does not need recruiters. If the kids are not recruiting for you then the college is not good enough. I am serious. There are plenty of kids around who want a good college to go to. The reason that they are not going is because they cannot find one that seems to them to promise anything else but a place to go and get a piece of paper. Do you think I overestimate? I do not think so.

I was talking up in Canada one time where one kid said to me, "Bob you know it's been a great speech. You have reminded me that I am angry." And the next kid stood up and said, "But Bob, it is not much use reminding me that I am angry, because what am I going to do about it? I'd rather forget, please."

When I go on campus, I am told that students are apathetic. I cannot see it. I think they are frustrated. I think they are confused. I think they are baffled. And I think they are dangerous. And I think *we* are dangerous. You see, I am not worried about us running out of supplies of coal, or oil, or gas. I do not think we are ever going to get there. I think we are going to destroy ourselves in an explosion of collective frustration. If you think I exaggerate, start talking to some psychologist or clergy about the collective state of the American psyche in 1977 and you will get yourself an earful, and you should scare yourselves. We are deeply unhealthy, because we do not understand the world in which we live. Because we are not being provided with the promises that this culture makes. And probably can no longer keep saying, for example, that there will be a rising standard of living for everybody, that education will bring rewards, and so on and so forth.

We are moving into an era that nobody understands, and those of you who took history know what has happened to cultures which have moved into new eras without understanding.

I believe we are living through an ahistorical process. One that has happened. Or to be more exact, I should say that I hope we are living through an ahistorical process, because we are going to need to survive.

Now, one final point, I have suggested to you that there are in this area of concern, like in all other, a public and a private rhetoric. When you meet in the pubs and over dinner and in the halls there will be one rhetoric. And they will talk about the serious problems and the need for fundamental change and how things are going wrong. And then we will have a series of formal presentations in which people will try to impress their peers and they will use different language and styles and assumption patterns to make those speeches. I do not think anything is going to happen until some of us have the guts to say in public that (to use the old tale) the emperor has no clothes. Remember the old story, the seller of dreams who came in and promised the emperor this remarkable suit of clothes but he said that nobody could see it unless he was wise enough. Of course, nobody was willing to admit that they were not wise enough to see the set of clothes. Until the emperor is walking down the freezing street, and a little comes along and said, "Look mommy, the emperor has no clothes on."

I do not think our culture is working. I do not say this with any sense of glee. I have said I am not a Negative Extrapolist. I can point to breakdowns in every system and I have been in a working management system in business or government or education or religion for more years than I care to think about. Yet somehow we believe that this is all going to come together. You know, we pile a whole slew of empty eggs on top of each other and everything collapses. It seems to me to be an unrealistic set of assumptions, now there is enough intelligence, goodwill, concern, in this culture to produce a better world for all of us. If I did not believe we could, I would not bother to work, but I do. I do not believe we will; that is another problem. But that depends on all of us.

I think all of us are going to allow ourselves to continue to be trapped in the requirements of our jobs. It is a nice line: God in his public capacity does things which in his private capacity he deeply deplores. Planners in their public

capacity do things which in their private capacity they deeply deplore. I am not suggesting you go back and tear up your departments, your universities. I am suggesting that all of us have more incremental capacity to change things than we are willing to recognize.

Two final statements: one, I and our so-called firm, *Participation Publishers,* are trying to put out material on this set of issues primarily on what we do rather than on theory. I brought a few sheets on that; if anybody wants to take one, please do. If I run out, I did not bring many because I try to save paper, I will save one and put it on the message board at the other end of the lobby so that people can find it.

Second, I would like to have no applause. It is probably a gimmick to sort of change the ending. But it is also because applause is an industrial-era trick. It is designed to wake up the audience so that they can leave comfortably, to convince the speaker that he was not so bad that you are willing to be actually rude, and perhaps above all to waste psychic energy. So those of you who are listening please refrain from applause (and we will know who was not) and use the energy to talk to each other as we go into the coffee break.

Thank you very much.

Relationship of State Government and Higher Education in the Future

AMBASSADOR PATRICK LUCEY

It is a pleasure to be here today—to be in Seattle, to be back in the United Sated and to be in the company of such a distinguished group of academic administrators. It is a pleasure but also somewhat peculiar.

For about a month now I have been learning and practicing the art and science of diplomacy. I have put aside the problems of how dollars can be raised and distributed most equitably and I have instead begun to focus on the performance of the dollar in the international money markets. I have ceased to be the chief administrator of a human services delivery system designed to meet the full range of needs for four and one-half million citizens and I have begun instead to become knowledgeable about the challenge of providing basic services to a population of more than sixty million and one that is increasing more rapidly than that of any other country in the world. I no longer communicate with the Federal Government as a Governor, in an attempt to strengthen and make more manageable our federal system here in the United States but I have begun instead to engage in a dialogue with many of the same officials about how we can develop a relationship between the United States and her sister countries that is in the enlightened self-interest of our people.

Governors, as elected public officials, are supposed to be quite candid. Diplomats, on the other hand, have a reputation for the language of elegant confusion. Whether or not

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that is true, because you invited me here today as a governor, I hope you will allow me to be candid with you. I really don't know how to speak in any other way. Even if I did, I think the subject you have asked me to address requires that there be no ambiguity in the delivery of my message—and I hope that, unlike the fabled messenger of old, I can bring you what may be somewhat unpleasant comments without fear for my life or my personal safety.

There is no doubt but that these are unsettling times for our public universities.

Four major developments appear to have bruised university communities in recent years. First, there has been a general decline in confidence in government and in public institutions. There is an old saying that a rising tide lifts all the ships. Apparently it also works in reverse. As unjust policies, corruption, program failures and increases in bureaucratic intervention have soured Americans on some departments of government, all public services have lost standing. One who studies the Gallup opinion poll for the past decade will notice immediately that Watergate did not have the effect of reducing confidence in the presidency alone. Rather all branches and levels of the government suffered a loss of public face. Universities were caught unwittingly and unwillingly in this ebbing tide.

A second factor and damaging blow over which universities have had no control is the changing demography of the United States. Quite simply, the birth rate has declined sharply and with it, the traditional pool of university students. In Wisconsin, for example, there will be only about half as many students reaching college age in the next generation as there are completing high school this year. It is also true that in some states the vocational school system is becoming a much more aggressive competitor enrolling students who would have previously gravitated to the universities. It is thus possible that universities will be receiving an increasingly smaller share of a diminishing pool of potential students. It is also possible, as some argue, that universities will attract large numbers of new, non-traditional students. Whatever the validity of that argument, I believe a realistic administrator must accept the idea that student populations at campuses will decline.

A third bruising blow to the universities has been the gap between public expectations about the tangible benefits of a university education and the realities of what universities can actually accomplish.

The debasement of the university degree in the economic market places was an inevitable result of a period of prolonged national economic distress. And yet the circumstances of finding graduates with advanced degrees among the ranks of the underemployed or even the unemployed came as a shock to those most directly affected.

And the ensuing disappointment fell at least as much on educators who had overpromised as on national political leaders who made foreign and domestic policy or on business and union leaders whose decisions greatly affect the efficiency of our economic machine.

Finally, universities have been caught up in the general demand for accountability and some believe this is simply a reflection of declining confidence in public services. But I hold a different view. America is experiencing (some would say suffering) a revival of the populist spirit. People are determined to bring institutions under their control. Not only government institutions, but every kind of institution. Individuals will no longer quietly suffer personal defeat to accommodate institutional necessities. Instead, they want to get a handle on institutions. And one way they can do that is by pressuring elected officials to bring under tighter control the great public bureaucracy financed with taxpayer money as well as the great private institutions that operate under government regulations and, often, governmental sufferance. Higher education is one of these institutions. And it cannot hope to isolate itself from this or any other social movement of such enormous consequence.

The problems I have set out are real and they are serious. But I did not travel this great distance merely to hang crepe throughout this handsome meeting room. I am confident that if our universities are prepared to take the initiative and bring about certain internal reforms, they can approach and survive the coming years in a manner that will assure them the support they deserve and the support they must be provided.

First, universities must convince themselves not only that the growth enjoyed in the 1960's is over but that the comfortable circumstances generated by that growth are also gone. Funds to support every worthy educational experiment, and some not so worthy, simply are not available. In facilities, and research, and prestige, and the other amenities that were gained in the 1960's, faculty must simply adopt more modest and realistic expectations.

Second, universities must begin to spell out far more realistically what benefits can be expected from a university education. They must learn to be wholly candid about the tight job market for their graduates. Not only must students and their parents be told these facts, but legislators and governors must know them as well. A little more truth in advertising will serve the university well in the long run—not only by dispelling the anger and bitterness stemming from the disappointment and frustration of its graduates, but also by adding to the reputation for credibility of the universities the most precious of all resources in politics.

Third, universities must develop effective means of academic planning and academic program evaluation. In short, they must develop systems for holding themselves accountable or they must expect outsiders to do the job instead. It is an anomaly of our time that universities have lavished hundreds of millions of dollars on research, involving the evaluation and criticism of a host of public and private institutions, but those same universities seem unable to evaluate their own teaching, research, and public service in a way that can be reviewed by the public and by elected officials. Moreover, universities have been remiss about eliminating programs which stack up poorly on such existing measures of academic programs evaluations as do exist.

University autonomy has always been a strong point in American higher education; but the continued production of Ph.D.'s in fields already saturated several times over cannot be justified by claims of independence. The real tragedy is that the glut in some academic specialties has not driven out weak programs. Instead, tax dollars are reduced for all such programs, supporting scaled-down programs in all institutions, are forced to make curtailments because the tax subsidy to the weakest are not wholly shut off when overproduction occurs.

It is in this arena that Wisconsin has scored significant successes as a result of its merger of the University of Wisconsin and the Wisconsin State Universities into a single system. Differentiation has occurred, with each campus having a distinct mission statement. Aspirations for Doctoral Programs were promptly laid to rest in all but two of our universities. Moreover, academic program review has become a reality. At the outset more than fifty programs on a "wish list" of various campuses were eliminated by assessing the need for them in light of their availability elsewhere. Then a system-wide review of academic programs was initiated. In the case of medical technology, this process made clear that only eight programs were required to train all of the needed personnel, and that it was possible to eliminate others, the four highest cost programs in the system.

But university merger in and of itself is obviously not a universal solution to the kind of problems I have been discussing. But it does represent an effort to rationalize the organization of higher education in a particular state and to create the kind of framework for higher education that facilitates program planning and evaluation. And I am convinced that if universities throughout the country do not soon develop whatever processes are required to get these two objectives accomplished, they will likely discover that others have stepped in to do the job for them. And quite frankly, I do not believe such a circumstance would be in the best interests of the universities or of the general public.

When universities have successfully initiated new and effective internal decision-making processes it will then become possible for them to make strong and effective presentations on their own behalf in the public arena. Here universities need to recognize a new set of political realities. Among these is the fact that many universities have lost their traditional constituency. The relationship to the agricultural community—through farm organizations, county agents, and extension programs—that once succoured our great land grant institutions is no longer sufficient to generate the kind of support that universities require. The agricultural community is vastly diminished, and its character—expecially in the development of corporation farming—has changed dramatically. Furthermore, no lesson can be more apparent from the

last decade than that an alumni constituency—organized around athletics and good fellowship—is not a very useful ally in the battle for academic freedom, academic programs and adequate budgets.

But the makings of a new constituency are clearly at hand. And this new coalition should have at its core current and future students and their families who encounter universities that are more sensitive to the importance of undergraduate education and more open about the likely value of a university degree. Extensive community education programs and greater public service to the growing sectors of the community would add further to the university's political base. And some increase in applied research, without foregoing the highest priority pure research, would heighten the appreciation of some segments of the public for the university's research mission.

Beyond the search for a new constituency, universities would do well to wholly rethink their style in working with elected officials. The sharp questioning of legislators should not be seen as an intrusion by the Huns into the sacred precinct of the university. Rather, it should be welcomed as an opportunity for the university to explain itself and sell its qualities. If it cannot do so, then it should worry about its program rather than resenting the questioner. We have the best educated and most aggressive state legislators we have ever had. Most of them are products of tthe universities for which they now make policies and budgets. In a real way the aggressiveness of legislators in dealing with universities is a mark of the success of higher education—for at its best a university education teaches skepticism, questioning, and analytic ability. It is precisely these legislative qualities that inflict such discomforts upon universities.

Moreover, the "Buddy System" under which established university administrators once worked with senior legislators is gone. The government has become too large, legislators too professional, and the public too demanding for university budget and program to be settled by a handshake because of the personal goodwill that power brokers in the university president's office and the capitol feel toward one another. Similarly, the professionalization of legislatures has made not

only obsolete, but also counter productive, the frills and favors that once characterized university relations with legislators. In the last two years, Wisconsin legislators, with a bit of a nudge from an ever-vigilant newspaper, not only voted to eliminate their cut-rate tickets to university athletic events, but in the current budget voluntarily voted out of existence the long-standing out-of-state tuition scholarship that each legislator was entitled to award annually. Social events at the president's mansion or the faculty club have a similar disutility. University leaders must again treat public officials not only with respect but with professionalism. I am persuaded that legislators today are more anxious and more capable of making decisions on the merits than at any time in the modern history of state politics. What they want and need is accurate information, careful analysis, and candid appraisal. Public agencies which provide vital services efficiently rarely suffer in the long-run, and not even usually in the short-run, from such professional conduct.

What I have tried to suggest to you today is that improving the relationship of universities and government is not primarily a public relations job or even an organizational task. It involves changes of a fundamental kind. There must be a careful reevaluation of the causes of friction and a better understanding of the new environment of higher education. Second, there must be very substantial changes in attitudes and activities within the universities themselves. Only then, finally, can the universities take realistic steps to build a new constituency, develop better plans, and relate to public officials on a professional basis. This is, quite frankly, a more severe challange than most universities want to accept. But they ought to take up this challenge, not only for survival, but because it is the right thing for them to do as a central institution in a free and democratic society.

The Future of Manpower; The Economy and Higher Education

WILLARD WIRTZ

The older you get, the harder it is to contribute to a discussion of "creating the future." You feel increasingly that you are talking about somebody else's business. You realize, too, that words you have used all your life—such as "manpower" (which the dictionary defined until recently as "a unit of energy roughly equivalent to one-tenth horsepower")—are straight-jackets constraining your thinking. The baggage of your own experienc- gets heavier and less useful as the climate changes.

Yet in another limited sense there is a release in having your own personal future behind you. A case could be made for turning all major decision-making over to those under 25 or over 65, on the theory that the intervening years are so beset by the promptings of personal ambition and obligation that perspective and objectivity haven't any real chance. Dreams about the future get driven out by nightmares stabled in the past and spurred by the present. I suspect that the future, perhaps even whether there is to be one, depends at least as much on the exercise of faith as of reason and more on boldness than on caution. Faith and boldness are easier for those who are either young or old.

One other preliminary. Our purpose in talking here about "creating the future" will not be well served by either an attempt at prediction (though there must be a measure of

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this) or an indulgence in the pleasures of utopian fantasy (though dreaming a few impossible dreams won't hurt). It is more to the point to try to identify those factors and forces in present circumstances which we can ourselves shape and influence at least a little bit toward making the future seem as good an idea as possible by the measure of our underlying ideals and our hopes.

On these terms, two elements in the relationship between education and the economy—which is the subject you have assigned me—seem worth consideration.

Suggesting them quickly, as a guide to what follows:

First, it is apparently developing that the American economy *as it is currently conceived of* is not going to make full use of the output of American education.

Second, there are increasing signs of crumbling in the convention that Life is by its nature divided into three time traps—so that youth is identified with learning, maturity with working, and older age with the denial of opportunity for either of these worthwhile and gratifying pursuits.

These two developments emerge on closer analysis as curiously, in some ways paradoxically, inter-related. Taken together, they offer both challenge and promise to those with serious intent to weave the frayed strands of the present into a stronger future, perhaps especially to those charged with the planning of higher education.

A NEW ECONOMICS

The first of these developments, involving an apparent increase of education's supply and a decrease in the economy's demand, is seriously disconcerting—for it brings into question an underlying assumption about the basic relationship between these two processes.

More than we realize, American history has developed on the understanding that the economy, though it changes over time, is to be taken as a given so far as the relationship between the economy and education is concerned, while education is to be considered a responsive variable. The nine-month school year developed as a reflection of the seasonal

character of agriculture. So long as the Industrial Revolution required all the strong masculine backs and muscles that could be mustered, and so long as women's business was misconceived of largely in terms of child-bearing, the formal training of most people's minds ended at that age when their bodies could serve these other functions. Although it is pleasant to think of the historic increase in the 1950's and 1960's in the secondary school retention rate and in the percentage of young people going on to college as a reflection of rising national regard for the values of higher education, the plainer truth is probably that this development reflected the economy's diminishing need for unskilled workers and its increasing demand for more highly trained young people.

This isn't cynicism. The consequence of gearing education to the economy's needs has been that a higher percentage of young Americans get more education of broader nature than has been true anyplace else in history or the world.

There has been, furthermore, a trade-off element in this relationship. Part of the exchange for the supplying of whatever "manpower" the economy needed was an assurance that if the educational system would provide young people with the right training the economy would use them—subject only to the occasional effects of cyclical vicissitudes. The economy was growing so rapidly, furthermore, and along lines which required such a constant upgrading in young people's talents, that education had all it could do to keep up with the demand.

The difficulty today, and the critical prospect for the future, involves the breakdown in this trade-off. The youth unemployment rate now ranges, depending on what group of young people is taken, from 15 to 50 percent—and is rising. No precise statistics are available to measure the *under*employment of college graduates, but that situation, too, is plainly worsening.

For roughly a decade—from the early 1960's until very recently—we indulged the illusion that this youth unemployment and underemployment was a consequence of education's having gotten out of gear with the needs of the economy. Young people were getting, it was asserted, either too little education or the wrong kind—more liberal arts and less

vocationally-oriented training than was good for them, meaning for getting jobs. "To get a good job," teenagers were told in a nation-wide advertising campaign, "get a good education." The "drop-out" rate went down sharply. College students shifted in large numbers away from the humanities and to majors thought of as contributing to salability. "Build better bridges," the slogan went, "between the two worlds of education and work"—which meant building them from the education end of the gap.

Yet the figures on both teenage unemployment and the underemployment of college graduates have gone up mockingly.

Last month, the Youth Employment and Development Projects Act of 1877 became law. It marks a larger advance than it was expected the Federal Government could take so quickly. Yet it is directed almost entirely to the "disadvantaged youth" problem and will in no way affect the underemployment prospect so many college graduates face.

There is still a lingering subscription to the notion that further stimulation of the economy plus the down-turn in the number of college graduates in the 1980's will at least alleviate this problem. No, not much. Not enough. This is a Maginot Line we have been hiding behind. The underlying causes of current youth unemployment and underemployment are in no major respect cyclical, but are the consequence rather of a confluence now of forces that have been gathering for a long time.

College and university planners' creation of the future will properly start from recognition that the answers to youth unemployment and underemployment are not going to be found in considering what to do about education. If we were to proceed along that line, we would be driven to the conclusion Sweden has now adopted by legislation, which is to ration the amount of higher education that is to be made available. That course will not be palatable in the United States.

The only other answers to the problems of unused and underused youth seem to me to depend on the development of a new economics—which takes the full use of the human potential as its starting point, and puts people in the first place instead of someplace else on down the line.

I mean an economics that would recognize, behind all of this apocalyptic talk about the limited perimeters of growth, two parameters in education which seem to get overlooked: one is the limitless amount which needs to be done in this country and in the world; the other is that while some *natural* resources are in critically short supply the *human* resource is boundless.

I mean an economics that would start from a commitment to make the fullest practicable use of the most highly developed form of whatever talents are inside people—instead of starting from a consideration of maximally profitable use, including the mis-use, of the elements inside the fragilely thin crust of the planet.

Such a policy would require putting all major enterprises to the testing of their comparative drain on dwindling natural resurces and their comparative use of the highly developed, meaning educated, human resources. This would present a hard question in determining, for example, the socially desirable balance of various uses of various forms of the automobile. But the Concorde would be, on its face, a monstrous absurdity.

Such a policy would lead necessarily to a review and re-definition of which kinds of human activity should be considered compensable and properly included in the Gross National Product—which would probably be re-named the Net National Achievement. Nothing would be excluded from consideration just because women used to do those things gratuitously: housework, for example, and bearing and raising children.

Such an economics would recognize fully the necessity of a system that is self-supporting and that provides for and depends on growth, which seems to me part of the law of both institutions and life. But the notion of growth would include different elements from those reflected in the grossest national product in history or the world; it would center rather on those elements of growth that coincide more closely with our human purposes and our underlying ideals as a civilization.

Starting from a fuller identification of individual and societal needs and desires and hopes than comes from gambling on how many people will pay how much for whatever is widely enough advertised, a newer economics based on the limitless human resource would center increasingly on services as compared with products. But this would not imply or mean, in the authentic American model, any diminution of private enterprise. There is no proven basis for the assumption that people would be less willing to pay, including a profit, for those things contributing to life's quality than they are for those detracting from it. We are still reeling from the lesson that so many millions of people would watch ten hours of *Roots*, and so many tens of thousands would stand in line for sometimes seven hours to get a glimpse of King Tutankhamen's treasures.

So my first suggestion regarding an effort by college and university planners to create the future is that it proceed from a consideration of what can be done in post-secondary education to develop a new economics.

I think it is a mistake, frankly, to pursue the alternative course of trying to emphasize the values of learning as such —whatever that means. As the third in what are now four generations of college and university teachers in my own family, that idea of an intrinsic life value in learning is appealing enough. The four values I accept without cross-examination are—perhaps in about this order—Love, Learning, Beauty, and Work. But I don't believe exalting learning as an end in itself is very effective as a practical matter. It won't attract a working majority of legislators, taxpayers, parents, or—perhaps most critically—students. Young people's habit is to learn what they think they are going to be able to "use" to *need* to know. Architects of the future will not advisedly abandon the operative principle that the strongest motive force supporting education—regardless of whatever other case it can make for itself—is its effectiveness in meeting the demands of "the economy."

So I would opt for the pragmatism of accepting the idea of education as a responsive variable, approximately adjusted to the demands of what is to follow it (in the current order of things) and properly identified particularly with the economy

—and then go about seeing that the economy makes more sense than the current gospel of the GNP has been taken as dictating.

Yet the worst mistake would be in assuming that this shifts the responsibility for creating the future away from the stewards of education to those of the economy and the polity. I grew up on what now seems to me the misconception that change is the business of legislators and entrepreneurs and that the responsibility of education is primarily to conserve the inheritance of experience. A professional life divided about equally between the two arenas leaves me persuaded it is almost exclusively in education that the seeds of significant change, at least constructive change, can be expected to grow.

Someplace, and the colleges and universities are the only place it can be expected to happen, the economists are going to have to be charged with responsibility for making their discipline something more than a logical formula for rationalizing whatever is the conventional politics of the times.

Someplace, and only it seems to me in the educational system, the stewards of the future are going to have to play the critical gamble—which neither the governors nor the entrepreneurs are going to take—that a working majority of people in this country are more interested in an economy which exalts the quality of life and the full use of the limitless human resource than in an economy based essentially on the extraction and re-working of diminishing natural resources.

I have called it a new economics. It is really a new politics. Both depend on a new education.

LIFELONG LEARNING

If one development in the current relationship between education and the economy—important to creating the future —is reflected in an apparent oversupply of educated youth, there is seeming paradox in the suggestion that the second such development is the coincident emergence of an unprecedented expansion of 'adult' or 'continuing' education. How can it be squared, or can it be, that with more and more

young peeople staying on into and through college—and finding less use for the net total of their education— a rapidly increasing number and percentage of adults are returning to formal education of one kind or another? Doesn't this second development exacerbate the consequence of the first?

I *think* the seeming paradox is an illusion, although this isn't clear. What *is* clear is that there are inexorable forces behind the movement toward the concept of lifelong learning, that it is emerging as one of the conditions of sense or even sanity in the experiencing of maturity and especially of older age, and that "creating the future"—from the standpoint of either college and university planners, in particular, or the human race more generally—requires giving this development full recognition. In dealing with the traditional relationship between education and the economy, it could at least be assumed that learning (in the formal sense) would come first, followed by working—with only incidental, peripheral, and rare deviation from the pattern. This is no longer the case, and the certain prospect is for a significantly larger interspersal of these processes in the future.

It seemed important to the preparation of these comments to try to get some kind of relatively clear picture of the amount of adult education going on in this country today. Any of you who may have made a similar attempt will share the consequent frustration. Quite literally, the currently available statistics would support the use of a current "adult education" figure for the United States of from approximately one million (the figure for non-degree-credit enrollment in institutions of higher education) to 50 million (a reasonably estimated figure for the number of people over 22—the usual college graduation age—taking some kind of formally offered educational course).

Even these figures take no account of the on-the-job training which takes place in the course of regular employment. The extent of such training is suggested by estimates indicating that the current expenditure for such training is probably in the $90 billion to $100 billion per year range—roughly comparable to the expenditures on formal education. (The comparison is misleading, however, because the on-the-job training estimates include the wages of the employees in training.)

The best I can do with these statistics is to estimate that something between five and ten percent of present post-secondary education (in full-time equivalent figures; quite a lot more than this in terms of enrollments) is being taken by men and women *following* a substantial period of full-time employment—either in the "labor market" or in the home.

The largest importance of this estimate is in a comparison of what it is today with what it used to be and what it is likely to be in the future. Fifteen years ago—before the sudden large-scale development of the community colleges, although this is only one factor in this changing picture—the adult education figures (using this term in the suggested sense) would have been, not five to ten, but probably one to two percent.

I am going to *guess* that in another generation—say by the year 2000— this figure will be in the neighborhood of 25 percent and that adding one more generation will take it very close to the 50 percent mark.

The figures themselves are unimportant, however, as they are fragile. The critical fact is that we are moving rapidly away from the notion that education is an exclusive prerogative of youth, that work is maturity's sole function, and that older age is for pasturing. The planning of college and university education and the creating of the future will have to give major account to the prospect that tomorrow's students will include large numbers of women turning from career-motherhood to career-something-else, of men and women moving to second careers because either technology's inventions or their own interests prompt it, of older people rejecting the twin fallacies that security is life's ultimate door prize and that retirement—any more than leisure generally—is an unskilled occupation, or non-occupation.

I suggest just one little indication of how rapidly this change is taking place and of the new forms it is likely to take. There is hardly notice today of the tuition payment plans which are being included now in collective bargaining agreements, but we have been making a study of them at the National Manpower Institute. Looking at the approximately 2000 such agreements which cover 1000 employees or more, we find such tuition payment provisions in some 280 of them. That figure was 29 ten years ago.

Although these provisions vary greatly in detail it would be characteristic of many of them that they include undertakings by the employer to repay any employee's tuition costs at recognized educational institutions—for the taking of courses related to the employee's work—up to amounts in the $500 to $1000 per year range. Our study indicates that some 2½ million employees are covered by these negotiated tuition aid programs. The employer financial commitment is potentially in the hundreds of millions of dollars. There are another large number of comparable plans established unilaterally by employers in non-union companies or to cover employees outside the collective bargaining unit.

The *use* of these tuition aid programs is another story. Although our study is incomplete, the preliminary indications are that only about one in twenty eligible employees is taking advantage of these contract rights. The programs are more important, so far, as illustrations of the new patterns of adult education that are likely to develop and the new forms of educational financing that can be anticipated.

But what are the broader implications of all of this? More youth and now more adult education for what? Isn't more education—at least for youth—contributing to the problem? Will the further education of workers result in their increased employment or to bitterer frustration of enlarged expectations? What is it that older people could do with an opportunity at age 60, say, or age 65, to renew their education?

I wish I had answers to match the questions. I don't have. They lie, however, in that same area—of developing an economics, in E. F. Schumacher's phrase, as if people mattered. The problems of youth unemployment and of the underemployment of college graduates are dangerously misperceived if they are thought of as limited to youth alone. The fact is that we are managing to keep unemployment in this country below an over-all 10 percent level only by postponing the age at which young people start working and by putting more and more older people out to pasture earlier and earlier for less and less good reason.

As the work week, the work year, and the working life continue to shorten—as machines take over more and more of what people used to do—as women assert in practice their equal employment rights—the amount of time left over after doing what has traditionally been considered the work of the economy is going to increase. More and more time is going to be spent (1) on education, and (2) on doing those things which need so much to be done but which we have not previously considered part of the economy's functioning.

The question you have raised of the relationship in the future between education and the economy seems to me central to both the planning of the future of colleges and universities and the creating of the future in general. It is with complete candour and with a humility compelled by necessity that I confess that the only answers I can live with when I get to them require a re-ordering of the economy—to base it on the use of the boundless human resources to meet limitless human needs and desires we identify with the quality of life.

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I realize that this becomes almost a profession of faith. But there need be no apologies, I must hope, for this. It would be an illusion that a two-day conference would permit charting a course into the future. The most we can hope is to get our thinking attuned a little better to the demands of a formidable undertaking. And I suspect that the paths into the future sometimes emerge more clearly in the soft lantern light of faith than in the glaring headlights of reason—at least if that faith is accompanied by boldness.

We advisedly remind ourselves that we remain children of unfathomed mystery, still surrounded by secrets that dwarf to insignificance what is so far known; that we have, therefore, no basis—unless the premise be taken as itself the conclusion—for asserting that only what can be proved is true.

The danger is that we will build our syllogisms too much on experience, too little on vision; that we will forget that "the inevitable is only what we don't resist," the unattainable only what we don't attempt.

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Creating the future demands the boldness to say, with Cervantes, that some facts are enemies to the truth—especially when they tell only part of it; the boldness to assert an underlying ideal when a conventional idea falls short.

"Cogito ergo sum"? I am because I think? But since Descartes' pronouncement *machines* have learned to think all inherited thoughts. If we *are* because we think, we shall *continue to be* because we believe—even if only in the Grand Mystery of it all and that this mystery is worth the eternal, relentless quest.

College and university planners' sights will be set only most immediately on the problems reflected in statistics about youth unemployment and underemployment. You will look behind and beyond these for the broader answers that may be in developing a new economics and breaking up Life's constraining time traps. Yet the guiding stars of your ultimate purpose are in T. S. Eliot's haunting questions:

Where is the wisdom we have lost in information?

Where is the understanding we have lost in knowledge?

Where is the life we have lost in living?

You who are charged with stewardship of the long range planning of colleges and universities have superior opportunity to look for the answers to the poet's questions and ours—to tell us how to recapture these losses.

The future seems to me to continue to be a good idea.